

CD137L (AT113-2): sc-58949

BACKGROUND

CD137, also designated ILA and 4-1BB in mouse, belongs to the tumor necrosis factor receptor family and delivers a costimulatory signal to T lymphocytes. CD137 is expressed on activated T cells and binds an inducible ligand that is found on B cells, macrophages, and dendritic cells. Interactions between CD137 and its ligand are involved in antigen presentation and the generation of cytotoxic T cells. Crosslinking of the CD137 ligand induces apoptosis in resting lymphocytes. In contrast, CD137 regulates peripheral monocyte survival by inducing a cytokine release profile, and is mediated by M-CSF and to a lesser extent by granulocyte-macrophage colony-stimulating factor and IL-3. Soluble forms of CD137 are found in sera from patients with rheumatoid arthritis and may provide a negative control mechanism for immune responses.

REFERENCES

1. Michel, J., Pauly, S., Langstein, J., Krammer, P.H. and Schwarz, H. 1999. CD-137-induced apoptosis is independent of CD95. *Immunology* 98: 42-46.
2. Langstein, J. and Schwarz, H. 1999. Identification of CD137 as a potent monocyte survival factor. *L. Leukoc. Biol.* 65: 829-833.
3. Lanstein, J., Becke, F.M., Sollner, L., Krause, G., Brockhoff, G., Kreutz, M., Andresen, R. and Schwarz, H. 2000. Comparative analysis of CD137 and LPS effects on monocyte activation, survival, and proliferation. *Biochem. Biophys. Res. Commun.* 24: 117-122.
4. Kwon, B., Moon, C.H., Kang, S., Seo, S.K. and Kwon, B.S. 2000. 4-1BB: still in the midst of darkness. *Mol. Cells* 30: 119-126.
5. Kienzle, G. and von Kempis, J. 2000. CD137 (ILA/4-1BB), expressed by primary human monocytes, induces monocyte activation and apoptosis of B lymphocytes. *Int. Immunol.* 12: 73-82.
6. Gramaglia, I., Cooper, D., Miner, K.T., Kwon, B.S. and Croft, M. 2000. Co-stimulation of antigen-specific CD4 T cells by 4-1BB ligand. *Eur. J. Immunol.* 30: 392-402.
7. Michel, J. and Schwarz, H. 2000. Expression of soluble CD137 correlates with activation-induced cell death of lymphocytes. *Cytokine* 12: 742-746.

CHROMOSOMAL LOCATION

Genetic locus: *Tnfsf9* (mouse) mapping to 17 D.

SOURCE

CD137L (AT113-2) is a rat monoclonal antibody raised against CD137L of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

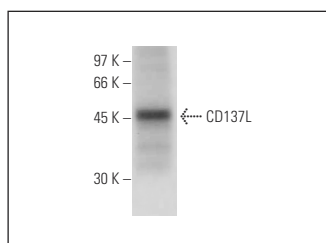
APPLICATIONS

CD137L (AT113-2) is recommended for detection of CD137L of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10⁶ cells).

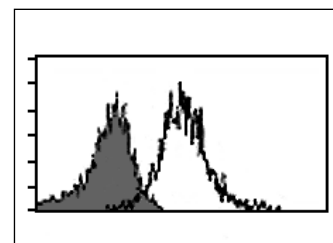
Suitable for use as control antibody for CD137L siRNA (m): sc-42828, CD137L shRNA Plasmid (m): sc-42828-SH and CD137L shRNA (m) Lentiviral Particles: sc-42828-V.

Molecular Weight of CD137L: 60 kDa.

DATA



Autoradiograph analysis of CD137L expression in CD137L transfected NS-1 cell extract immunoprecipitated with CD137L (AT113-2): sc-58949. Data provided by Alison Tutt, Laboratory Manager, Tenovus Research Laboratory, CSD, University of Southampton UK.



CD137L (AT113-2): sc-58949. Indirect FCM analysis of BCL1 tumor cells stained with biotin-conjugated CD137L (AT113-2), followed by Avidin-FITC: sc-2865 (black line histogram). Solid histogram represents the isotype control, normal rat IgG. Data provided by Alison Tutt, Laboratory Manager, Tenovus Research Laboratory, CSD, University of Southampton UK.

SELECT PRODUCT CITATIONS

1. Semionatto, I.F., Palameta, S., Toscaro, J.M., Manrique-Rincón, A.J., Ruas, L.P., Paes Leme, A.F. and Bajgelman, M.C. 2020. Extracellular vesicles produced by immuno-modulatory cells harboring OX40 ligand and 4-1BB ligand enhance antitumor immunity. *Sci. Rep.* 10: 15160.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.